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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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IMB CORPORATION
INTELLECTUAL PROPERTY LAW
DEPT. IQOA/BLDG. 040-3
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EXAMINER	
LOFTUS, ANN E	
ART UNIT	**PAPER NUMBER**
3694	

MAIL DATE	DELIVERY MODE
07/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/008,731	LIU ET AL.	
	Examiner	Art Unit	
	Ann Loftus	3694	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 4/9/07.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-30 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-30 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of the Claims

1. This action is in response to the amendment filed on 4/9/07. Claims 1-30 are pending. Claims 1-2, 10-12, 20-22, 24, 25, and 28-30 are amended.

Response to Arguments

2. Applicant's arguments with respect to claims 1-30 have been considered but are moot in view of the new ground(s) of rejection.

By not traversing, the applicant has accepted the Official Notices taken in the first action as prior art of record, namely, that the following are old and well-known:

- deciding not to sell unprofitable items and
- identifying high profit items, mid profit items, low profit items and giveaways/incentive items
- and deciding not to sell items in certain profit categories.

Claim Objections

3. Claim 11 is objected to because of the following informalities: The word "to" in the last line of the claim renders its grammar unclear. It was removed from claim 1 by amendment. Appropriate correction is required.

Claim Rejections - 35 USC § 101

4. The examiner withdraws the rejection under 35 USC 101 due to a change in internal guidance.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 1, 11, and 21 are rejected due to the language "that will generate a profit". The associations may be expected or predicted to increase profits, but profitability cannot be guaranteed before the fact, due to unexpected costs and sales that may vary from predictions. Even looking at historical data, such that costs and sales are known, an assessment of profitability of a product may vary depending on which costs and which revenues are included for that product. Perhaps a package of products is sold for a discount, and the decision about which product is discounted changes. Or customer service costs may be reassigned, changing profitability after the sale. Thus whether a product will generate a profit cannot be known ahead of time, but merely predicted or

expected. The examiner respectfully suggests that language such as [a subset of associations] "that is expected to generate a profit" avoids such concerns.

Further in claims 1, 11, and 21, the term "creating data" is unclear. The specification gives no guidance on creating data. If the data is created rather than collected or calculated, it may have no relevance to the enterprise at hand, thus any associations generated would be worthless. A person of ordinary skill in the art would not know how to create data to make the invention work.

The remaining claims inherit the limitations of the parent claims, and are therefore also rejected as above.

7. Claims 1, 10, 11, 20, 21 and 30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

As to claims 1, 11, and 21, "creating data" is not supported by the specification.

As to claims 10, 20 and 30, a "product code" is supported by the specification, but a "unique identifier" is not. There is a section of the specification that reads (page 29, lines 8-12) "Each product is to be assigned a new product code by concatenating the current product code to a profit category level or by concatenating a new number to a profit category level." The claims address creating a unique identifier and modifying said unique identifier to indicate a profit level. A product code is a code that relates to

the product. A "product code" could be any data field associated with a property of the product, such as product_code = "mortgage". A unique identifier has the additional properties of being unique to a product type or individual product instance and being useful as an identifier.

While it is common to set up a product code as a unique identifier, not all product codes are unique, nor are they useful as identifiers. A product code that is set up as a unique identifier normally remains unchanged for the life of the product. Such codes are useful for queries and database keys. A person of ordinary skill in the art could presume both uniqueness and stability of this type of identifier, and furthermore, that a data query using the identifier would bring up all data associated with that product and no other product. However, the product code in the specification changes with profit levels, so it is not stable for the life of the product. A query based on this type of product code would only retrieve data related to the product during periods when it had the profit level specified in the code. Because it is unstable, it is not the type used as a database key, and therefore cannot be presumed to have the characteristics of uniqueness, nor be usable as an identifier. The examiner suggests replacing "unique identifier" with "product code".

Claims 2-10, 12-20, and 22-30 inherit the limitations of the parent claims, and are therefore also rejected as above. Applicant is required to cancel the new matter in reply to this Office Action.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 2, 12, and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claims 2, 12, and 22, the term "knowledge processing techniques" could mean anything from dreaming to a neural net analysis. The specification gives guidance about "knowledge discovery paradigms", but does not equate the terms. If the intent was to refer to knowledge discovery paradigms, then that term should be used. If not, consider that any technique which could produce an association rule would be a knowledge processing technique, therefore absent a tighter definition, the claim fails to further limit its parent. Correction is required.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6272478 filed 12/31/97 by Obata et al in view of Official Notice.

As to claims 1, 11, and 21, Obata teaches in col 7 lines 40 –52 using profit as an evaluation criteria for associations generated by data mining. Obata teaches a profit

threshold, which inherently establishes two levels of profitability, one which meets the threshold and one which does not. Obata teaches transforming data by including profit in the data in col 7, lines 40-52. Obata teaches storing transformed data in col 4 line 36. Obata teaches identifying associations in the association rule generator in Fig 1. Obata teaches generating association rules including profit level in col 7, lines 40-52.

The approach differs slightly, in that in the instant case, profit is identified before the associations are generated, whereas in Obata, the associations are generated first and the profit identified afterwards. Obata does not teach profit identification before association generation. Official Notice is taken that profit identification is an old and well known business practice, and a person of ordinary skill in the art would monitor the profit levels of their products on a continuous basis. Supply or manpower or equipment or regulatory issues can change costs at any time, leading to new profit assessments. Because profit identification can be independent of data mining, it could happen at any point in the process. It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Obata to identify profit levels before the association generation, in order to have a smaller dataset to process. In practice, few firms can afford data mining analysis for every product in every profit category, so some products are eliminated before data is collected.

As to claims 2, 3, 12, 13, 22 and 23, Obata teaches generating association rules in the association rule generator in Fig 1.

As to claims 4, 14, and 24, Obata teaches calculating profitability in col 8 line 56 – col 9 line 5.

As to claims 8, 18 and 28, the specification notes in the third paragraph of the Description of Related Art that many financial institutions identify customers for marketing cross-selling opportunities based on subsets of associations.

As to claims 9, 19 and 29, Obata teaches a marketing strategy in col 7 line 62 to col 8 line 10.

As to claims 5, 15, and 25, Obata teaches in col 7 lines 40 –52 using profit as an evaluation criteria for associations generated by data mining. Obata teaches a profit threshold, which inherently establishes two categories of profitability, one that meets the threshold and one that does not. Thus Obata inherently teaches profit level categories. Applicant is reminded of Official Notice that identifying high profit items, mid profit items, low profit items and giveaways/incentive items is old and well known. It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Obata to teach associating products or services with profit level categories in order to push items according to profit level and put more effort behind high profit items.

As to claims 6, 16, and 26, Obata teaches ordering associations by profitability and eliminating those below a threshold in Col 7, lines 40-52. This is equivalent to a subset of associations with products or services associated with profitable profit level categories as long as the threshold is set to a break-even level of profitability.

As to claims 7, 17, and 27, Obata teaches a subset of associations that have products or services that are associated with profit level categories that meet acceptable criteria in col 7, lines 40-52.

As to claims 10, 20, and 30, Obata does not teach modifying unique identifiers to indicate profit levels. Official Notice is taken that the use of unique identifiers with stored data is old and well-known. Official Notice is further taken that it is old and well known to store a profit level for a given product. It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Obata to modify unique identifiers to indicate profit level associated with products or services because that would allow prioritization of products selected for analysis. That way, high profit items could be analyzed for associations first, in order to identify opportunities for cross selling high profit items, which would be expected to generate more profit than low profit items.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

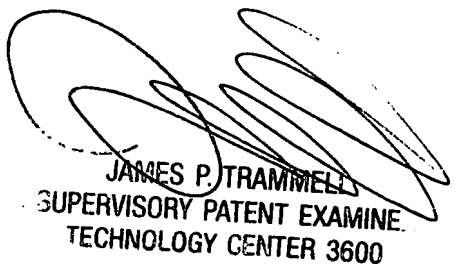
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ann Loftus whose telephone number is 571-272-7342. The examiner can normally be reached on M-F 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Trammell can be reached on 571-272-6712. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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